Elementary Industrial School

Cleveland Public Schools

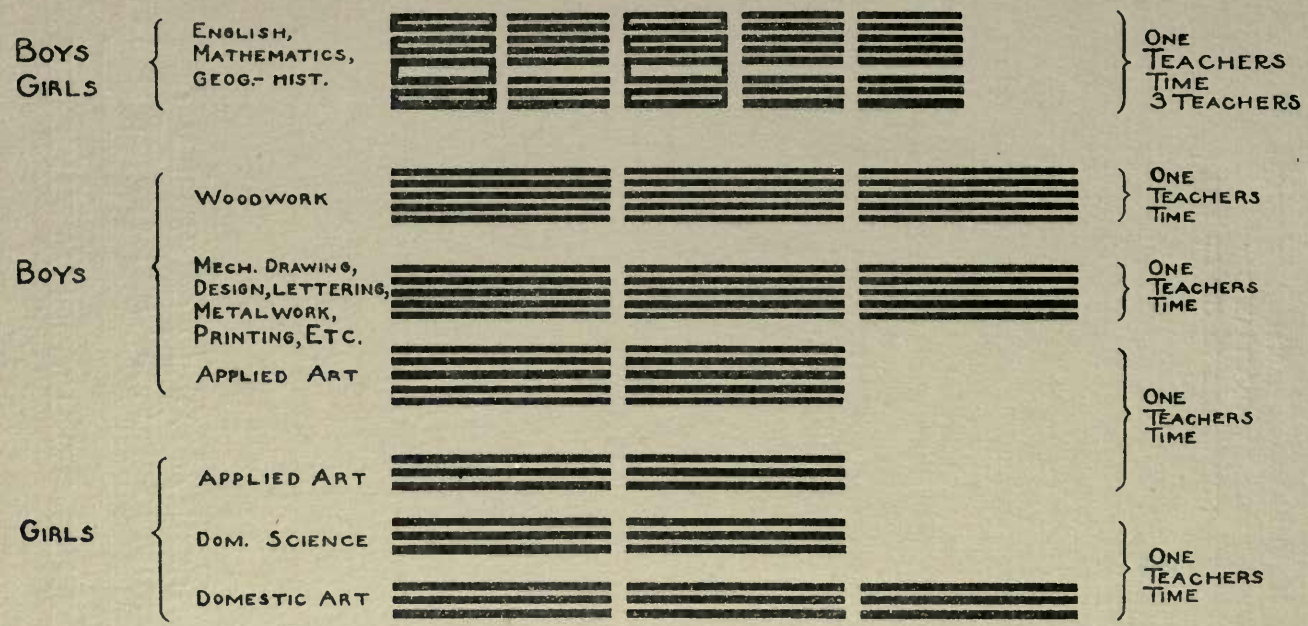
The Board of Education
1910

ELEMENTARY INDUSTRIAL SCHOOL

REPORT OF PLANS, COURSE OF STUDY AND A BRIEF SUMMARY OF RESULTS

THE BOARD OF EDUCATION
CLEVELAND
1910

Weekly Program 1909-1910



Lines represent classes of 20
Length of lines periods (45 m. or 90 m.)
Double classes in Eng., Math., and Geog.-Hist. two days

Joe Kish 8th Grade
Elementary Industrial School

CLEVELAND PUBLIC SCHOOLS
THE ELEMENTARY INDUSTRIAL SCHOOL

Mr. William H. Elson,

Superintendent of Schools,

Cleveland, Ohio.

Dear Sir,—

In compliance with your request, I have examined the aims, methods, and results of the Elementary Industrial School, and beg leave to make the following report.

Respectfully submitted,

William N. Hailmann, Ph. D.,

Normal School, Cleveland, Ohio.

In his report for 1908, the Commissioner of Education establishes the fact that current school systems confine themselves almost wholly to preparation for professional life; that even where they have consented to consider the claims of commerce and of certain technical pursuits, the aim lies toward quasi-professional superiority in these matters, toward preparation for positions of management and control, and that neither in the elementary schools nor elsewhere do the trades and the industrial life of the people receive adequate attention.

The Elementary Industrial School of Cleveland represents, on the one hand, an effort to correct this short-coming, to meet changing conditions in the economic life of the day with its growing demand for efficiency in industrial pursuits, and, perchance, eventually to make industrial training during the later years of elementary school life an integral part of the school system.

On the other hand, this school rests upon the recognition of the fact that very many of the failures of children in the work of the schools are due, not to lack of ability on the children's part, but to the failure to consider the needs of hand-minded or practical-minded children on the part of current systems in their one-sided attention to the language-minded and imaginative, in their reliance upon the imagery of words and abstractions, rather than upon the actualities of concrete life, both in learning and doing.

A recent study of the school life of a number of eminent engineers and lawyers by Dr. Kent of Columbia University adds great significance to this phase of the work. Dr. Kent finds that the engineers, when at school, showed a high percentage of exceptional strength in science and arithmetic and a correspondingly high percentage of exceptional weakness in literature, whereas the reverse was the case with the lawyers.

Learn by Doing

Elsewhere it had been observed that hand-minded children who had gained in their classes the reputation of dullards and who had themselves lost faith in their powers, were restored to confidence and learned to make satisfactory progress even in previously distasteful subjects, when opportunity came to them to exercise their powers in matters that appealed to their mental constitution and seemed to them worth while. If these children were to be afforded an opportunity to make the best of themselves, they must be approached from the side of the practical, they must learn by doing and in order to do. Thus alone could they be led to the "cultural," to the discovery of the inestimable value of knowledge, of science, of art and even to the pursuit of these for their own sake. Thus, alone, could the school hope to place them into full possession of their human inheritance, to reach and to stir into fullest self-active life every phase of their mental constitution.

The Opening of the School

As a first step in the attempt to meet the conditions indicated, it was decided to open in the fall of 1909 an elementary industrial school in a commodious ten-room building connected with the Brownell School, a central location. The advantages of the school were extended to children not under thirteen years of age and stranded in the sixth grade, and not less than two years behind grade.

The principals of the elementary schools were requested to send a given number of girls and boys who in their judgment would be benefited by the transfer. The consent of parents was obtained chiefly on the plea that the children were to be given a better chance for progress and promotion.

In this way a school for ninety-three boys and forty-three girls was organized in eight classes, five for the boys and three for the girls. The school, as already indicated, was not to be a mere avocational or trade school. Industrial considerations were, indeed, to lead and the practical tendencies of the pupils were to be appealed to and emphasized both in hand-work and in academic work. They were to revel, as it were, in practical efficiency. Yet, at the same time, no effort was to be spared to touch and stir the deeper springs of personality, of manly and womanly qualities in the pupils, to lead them to an appreciation of the social and esthetic value of work, to spiritualize their growing efficiency with elements of good will and joy.

The Course of Study and Time Schedule

The course is planned for two years, and the school is now in its second year. The school-day extends from 8:30 A. M. to 3:15 P. M. It is divided into nine periods, one of which is assigned to luncheon. This leaves forty periods per week for instruction and

practice. One-half of these are devoted to academic work in English, mathematics, geography, history and hygiene of a thoroughly practical character. The other half is devoted to industrial work, domestic economy and gymnasium practice. There are shower baths, a swimming pool and an auditorium for assembly exercises—rhetorical, musical, streoscopic, and general. The classes are segregated and no attempt is made to give classes of boys and girls the same treatment in any subject.

The Course for Girls

On the industrial and economic side, the course for girls includes cooking, laundering, and other household arts, sewing and garment-making, millinery, drawing and design, and applied art. The care of the sick-room and other features of home nursing receive attention; also plumbing, the care of traps, of the sink, refrigerator, bath-room, etc. Household accounts are treated, cost of food, fuel, service, rent, typical family budgets. Class visits are made to markets and house-furnishing establishments, to factories and shops.

A room has been set aside which serves consecutively as living-room, dining-room, bed-room, sick-room. In the furnishing of this the boys and girls co-operate; its subsequent management is in the hands of the girls.

The Course for Boys

The industrial course for boys includes mechanical and free-hand drawing, wood-work, pattern-making, design and craft. Throughout, the work is closely related to corresponding industrial pursuits. In woodwork, problems are given presenting the systematic use of tools and general principals of construction. Simple projects are made with reference to use and beauty, and correlated with this is the work in metal, mechanical and free-hand drawing. Commercial problems are offered in appliances for school garden, window boxes, bulletin boards, frames for school rooms, etc. House-furnishing receives consideration in conjunction with the work of the girls in their model room, as well as in connection with individual needs. Fundamental problems in building construction are solved in miniature to be later applied, it is hoped, in actual work. Metal fittings for woodwork, stains, paints and finishes are studied and applied. Class visits are made for definite purposes to shops and drafting rooms, to buildings in process of construction, paint manufacturers, etc. Stress is placed upon business methods, time-card, expense and checking system, measuring, estimating cost, bills, letters, materials and contracts.

The Effect Upon Pupils

The effect of the new work upon the pupils is full of encouragement. Under the stimulus of kindly and consistent discipline, and

of faith in their ability on the part of their teachers, and under the influence of work in both departments of the school, that dealt with directly intelligible problems and appealed to tangible interests, the children soon found themselves, discovered that they possessed abilities heretofore doubted, detected in their academic studies values bearing upon their immediate interests and turned to these studies with feelings of good will heretofore foreign to them. As they gained in confidence, they gained in poise. With increasing self-respect, there came to them increasing respect for the school and its work. With growing recognition of their social value and efficiency, they gained in individual self-assertion coupled with a deepening sense of responsibility.

Pupils Gain in Academic Studies

Significant is the gain of the pupils in their academic work. Indifference yielded to intelligent interest; discouragement and apathy in the presence of difficulty to determined persistence and the fervor of achievement. Parents who came to visit the school expressed themselves as much pleased, praised the growing interest and ability of their children in academic as well as economic subjects, seemed to enjoy the new sensation of pride in the work and progress of their children.

A concomitant result of this growing appreciation of the value of the school is found in the steady increase in regularity of attendance. The significance of this gain is enhanced when it is remembered that many of the pupils come from great distances involving trolley trips of from six to seven miles each way and, on the part of some of them, daily walks of three or four miles to and from school.

A lingering prejudice, due to misapprehension of the import of the school, that membership in its classes implied dullness, has been overcome so completely that the opening of the second year brought a number of voluntary applications from "bright" children. Moreover, a number of the pupils, some of whom had lost interest in school education, are now eager to prepare for entrance in the Technical High School.

OPINIONS OF PUPILS

Reports from Girls

A second-year class of twenty-seven girls was requested by the writer of this sketch to state freely in a letter addressed to him and closed without revision by the teacher, what benefit, if any, they had derived from transfer to the school and what were their favorite subjects of work and study.

The following extracts from the letters received will indicate the spirit of their answers with reference to the first point:

"Arithmetic and geography I never could understand in grade school, but since I have come here I am interested." "I like the school because the teachers teach the studies we most need, especially the boys and girls who want to earn their own living." "I find that I have improved in the subject which seemed to halt my progress in school. This subject was arithmetic, and I am grateful to the teacher and the school for their help." "The school work is told so interestingly that we can use it out of school." "I like the school because it has helped me to get good marks in school and be good to home folks." "The school has taught me to be more useful in the home and to be neater in my work than I used to be." "I hope this school will help me more every day, so that I may be more useful when I grow older." "Here we learn how to sew and cook, and we learn arithmetic and geography that we will use out in life." "Our arithmetic and other studies are given us in a way that will help us when we are grown up." "This school has helped me to wish to be helpful to others, and it has taught me work that, when I am home, I can help my mother." "The teachers here speak to us like grown-up sisters. They tell us what we should do in a way that makes us feel at home." "I enjoy coming here, because the lessons are more business-like." "Since I came here I have learned more than in the seven years at grade school, especially in arithmetic." "I like this school because I never could have learned anything and I am more use in the world. I learned how to be a lady." "Out in the grade school I felt as if I just wanted to stop, but here the work is so interesting that I don't like to leave it." "The school has helped me in what I needed most, obedience and behavior."

Cooking and sewing were mentioned as favorite subjects by twenty-one; gymnasium practice and swimming by eight; geography by six; arithmetic by ten; English by nine; drawing by five. Six of the girls are looking forward with eager interest to the millinery of the second-year course.

Reports from Boys

Letters similarly obtained from a class of thirty-seven boys, yield the following more or less significant extracts:

"The lessons were so interesting that I felt as if I was taking a new hold in life." "I am more business-like than I was before, and can do my work much better." "Mechanical drawing I like best, because you have to be neat and accurate." "It has taught me what an education means in life." "We do not sit in one room all the time and have the privilege of changing classes." "The school has made me be more of a man; it has made me have more self-respect and responsibility." "I like the shop-work because it gives me something to do with my hands." "The six hours in this school pass quicker than the five hours in the other school." "It makes me more respectful, and the work is more of the kind I like." "If the industrial school continues to be used to make men of boys, it will soon be of great value." "In making things at home I have more confidence in myself." "It has learned me to have better manners and to do better arithmetic and lots of other things." "The work I like best is arithmetic, because I did not know any at all before I came here." "I learned to be more obedient and my parents say: 'You seem to be learning more now than you used to learn.'" "The school has made a man of me." "The school has helped me to think and to get my work more easily." "Shop-work and drawing I like best, because they teach me to be accurate." "I like it because it is the line of work I will follow." (Several boys express this thought; others see in the work good preparation for the Technical High School, and one of these for subsequent attendance upon a course in scientific farming at the O. S. U.) "It has not only helped me in learning a trade, but to get along better in my other studies." "It has taught me to like school. I like all the work we have."

Among favorite subjects, mechanical drawing is mentioned by twenty-six, woodwork by eighteen of the boys. Seven boys praise the fact that they do not have to sit in one room all day. One boy criticizes "the poor location" of the school, but is otherwise much pleased.

Summary of Gains

Clearly, there has been distinct awakening in the life of these children under the stimulus of the new work. There are evidences of gain in sustained interest and purposeful effort extending even to so-called academic work. Stress is laid by the children on their gain in general interest, on the practical value of the school, on their gain in obedience and "behavior," in self-respect and confidence in their efficiency, a conviction that they amount to something. A few attribute this to the industrial and economic features of the work; others to the helpful attitude of the teachers; still others to the departmental organization of the school which does away with the feeling of constraint in being confined in one room "the whole day," and gives opportunity for the mental relief that comes from change of environment. Evidently the feeling of dawning manhood and womanhood with its "sweet responsibilities" has come to these children. They have tasted the proud privilege of self-education. Their school is to them no longer a fancied preparation for life, but has every ear-mark of actual life.

Interviews with teachers who guided the work corroborate the statements of these children. The testimony of these teachers indicates that the change in the attitude of the pupils towards school, including its academic work, was due in a large measure to the prominence given to industrial and economic work. This appealed to the practical interests and productive tendencies of the pupils, made the school worth while to them, "Kept them at school," as one of the teachers expresses it, "and gave us a chance to keep at them." Moreover, the academic work itself was approached primarily at points of contact with industrial and economic problems. This enabled the pupils to appreciate its value and its need in the achievement of their expanding ideals. To this must be added the strong individual interest of the teachers in the children, studying them continuously and respectfully in order "to get at them from within," letting them feel under the stimulus of unfailing justice and kindness that the school liked them, believed in them and in their ability. Without doubt, too, the effectiveness of this individual interest on the part of the teachers was greatly enhanced by the circumstance that the classes were smaller than is the case in the current graded school.

Children Predominantly Hand-minded

The success of the experiment does not imply adverse criticism of the work of the teachers in the ordinary school with its dominating attention to language, literature and history. Nor does it imply that these and other so-called cultural subjects of interest should receive less attention. Language and its offspring, history and literature, constitute, indeed, the highest possessions of man. Yet, his control of nature and life, as well as the dawn of reason and sentiment and the very birth of language are primarily connected with the use of his hands and their re-inforcement by tools. Even today, humanity as a whole depends for the continuance and increase of this control upon tool-using activities to which the great majority of human beings must devote their energies. Thus it happens that, under the joint influence of heredity and environment, the children born to humanity are primarily, if not predominantly, hand-minded.

In the family, the kindergarten and the primary school this is more or less intelligently recognized. Their hand-work remains, however, confined largely to the symbolism of play and rarely touches industrial and other economic utility. Later on, and more especially in the grammar school, this work is abandoned and the manual training that takes its place is so limited in scope, so wholly divorced from the bulk of the class-work and so incidental that it fails to meet the needs of the eminently hand-minded pupils. Hence the perfunctoriness, the slow progress, the lack of ability to retain and apply on the part of these pupils. Hence, too, at times, the irritability and apathy with regard to the progress of these on the part of teachers.

In a large measure the very history of the school accounts for this. The school was born among and for the language-minded. Intellectual and physical culture—not manual and economic skill—was its aim. The industrial worker was excluded from it; had no leisure, no **schole**, for it; had no time to engage in its play or **ludus**. And this one-sidedness still clings to the school, is hard to eradicate, in its appeal to the imagery of words and abstractions, its indifference for the concrete actualities of life. Even science occupies a minor place in its esteem; nature study still is at a discount; and with many the manual training, brought in by pressure from without, is a thing to be endured rather than encouraged.

We need, indeed, for professional and cultural ends all the school holds high in its traditions; but, in addition to these things or, perchance, in the place of certain phases of them, we need for the hand-minded contingent which is destined or preparing to deal with the industrial and commercial needs of humanity and with the progressive conquest and control of nature's forces, for these we need opportunity and guidance in the development of constructive, inventive and creative skill and genius in the fields of activity in which alone the best of themselves can become available.

Under the pressure of modern educational ideals, based largely upon the recognition of this demand, the needs of both these mental tendencies are fairly well met up to the age of twelve or thirteen and to an extent in secondary schools and colleges. On the other hand, much remains to be done in the higher grammar grades where distinctive tendencies assert themselves with adolescent vigor and intensity. Here a distinct differentiation is indicated in the courses placed at the disposal of the pupils. This need not involve complete separation, but, rather, a shifting parallelism that admits of frequent points of contact in the domains of science and art, of history and literature, where the two tendencies find opportunity and incentive to respect and appreciate each other and themselves in their respective, mutually complementary, superiorities.

COURSE OF STUDY

First Year, *Boys*

DRAWING

Simple Working Drawing

Freehand Sketching—Representation of simple objects, graphically and in view-drawing.

Working Drawings—Simple objects illustrating necessity for and arrangement of views. Conventions of lines, dimensions, sections, etc. Drawing to scale. Application in working drawings for the shop. Subject related closely to industry by using much illustration material, drawings, blue-prints, etc., and by visits to shops and drafting rooms.

Practical Outlook

Work as mechanical or architectural draftsmen.

Simple Lettering

Plain letters and figures used in mechanical and architectural drawing.

Application in connection with working drawings and sketches in the shop.

Composition in Lettering

Types of letters used in reference to artistic effect in spacing and in relation to margins and space to be filled. Tail pieces, line finishings, initials, illuminating, monograms.

Application in titles, title pages, book covers, bulletins, advertisements, business cards, etc.

Illustrative material, visits to printing office, etc.

Practical Outlook

Sign, bulletin and placard painting as a trade.

Design

For the development of the sense of outline, form and proportion.

Application in wood and metal work.

Simple Metal Work

Design applied in simple objects in copper, brass and other soft metals, particularly fittings for wood workbox corners, hinges, escutcheons, catches, drawer and door bolts, plates, surface decorations, etc.

WOODWORK

Preliminary Problems

Problems presenting systematic use of tools and general principles of construction, involved in simple projects of use and beauty, applying art principles of form and color, and correlating with metal work, mechanical and free-hand drawing.

Commercial Problems

Problems of commercial value, such as appliances for school gardens, window boxes, bulletin boards and frames for school rooms, etc., etc., otherwise made at the repair shop.

Finishes

Stains, paints and finishes studied and applied in various wood working projects.

Business Methods

Time card, expense and checking system, measuring, estimating, costs, bills, letters, materials, contracts, etc., etc., correlating with English, Geography-History and Mathematics, in both first and second years.

First Year, *Girls*

HOUSEHOLD ARTS

Aim

The training of pupils in the subjects which pertain to life in the home.

Cookery

Cooking of types of vegetables, cereals, the various cuts of meat, flour mixtures, instruction in the principles underlying the work, preparation and serving of meals, practice in writing menus, care of the kitchen and dining room.

Sanitation

Plumbing, cleaning of traps, care of the sink, refrigerator and bath room.

Laundry

Washing of dish towels and table linen.

Sewing

Care and use of machines. Making of uniform for household science, sewing bag, mending, hemming table linen, corset cover, shirt waist suit.

Art

Designs for table linen, wall paper, rugs, draperies, dishes, beauty in form of dishes and cooking utensils and fitness for use, lettering, title pages of note books, illustrations for note books, suitable pictures for the home.

Lettering for making articles made in sewing, textile designs, fitness of articles for their use, suitable designs for embroidery, pictures of beautiful costumes.

Household Accounts

Cost of food in the lessons. Cost of meals which are prepared. Cost per capita per day. Cost of furnishings, textiles, clothing.

Museum

Textiles and materials from which they are made, pictures of looms, spinning wheels.

Class Visits

Markets, stores, factories and shops.

Correlation

All of the work is correlated with English, Geography-History and Mathematics, in both first and second years.

Second Year, *Boys*

FIRST TERM

Work as outlined for the first year continued.

SECOND AND THIRD TERMS

Full time for industrial work (about eighteen three-quarter hour periods each week) may be devoted to specialization in one of the following subjects:

Mechanical Drawing.
Printing.
Cabinet Making.
Pattern Making.
Building Construction.

Class Visits

After class talks and discussions, visits to draughting rooms, buildings in the process of construction and finish, to cabinet shops, paint manufactories, printing offices, pattern shops, etc.

Second Year, *Girls*

HOUSEHOLD ARTS

Cookery

Preservation of food: canning of peaches, pears, tomatoes, jelly, sterilization. Preparation of such combinations of food as could be used for a meal.

Soups, bread, salads, simple desserts, preparation and serving of meals, infant feeding, invalid cookery. Practice in writing menus.

Sanitation

Review of first year work.

Laundry

Hard and soft water, action of alkalies, making of soap, preparation of starch, removal of stains, washing and ironing of various textiles.

Home Nursing

Making a bed, care of sick room, simple treatment of cuts and burns.

Sewing

Making of drawers, nightgowns, dress of wash materials. Emphasis is placed upon increase in speed.

Art

Household decoration and furnishing. Colors and materials suitable for the various rooms and uses in a home. Study of the principles underlying artistic construction in dress. Study of historic examples of dress.

Mechanical Drawing

Working drawing for anything needed for the kitchen such as table, drain board for sink, shelf or drawer for pantry, accurate measurements for windows for window fixtures, drawing to scale of windows.

Household Accounts

Cost of food, fuel, service, rent. Typical family budgets.

Class Visits

Markets and house furnishing shops.

Economic Value

The use which the woman makes of money in the home is of equal importance to the acquiring of the money. "It is the present duty of the economist to magnify the office of the wealth expender, to accompany her to the very threshold of the home, that he may point ont its woeful defects, its emptiness, caused not so much by lack of income as by lack of knowledge of how to spend wisely."